

DRIVE ROLLER CONTROL
FOR TORIC-DRIVE TRANSMISSION

ABSTRACT

A toric-drive transmission comprising a drive disk for receiving a power input. A driven disk transmits a power output. A roller device has a roller displaceably mounted between the drive disk and the driven disk. The roller has three rotational degrees of freedom. A first degree of freedom transmits motion from the drive disk to the driven disk to convert the power input to the power output. A second degree of freedom varies a ratio of the power output to the power input as a function of an orientation of the roller along the second degree of freedom. A third degree of freedom initiates a rotation of the roller about the second degree of freedom. A controller system is operatively connected to the roller device for changing the orientation of the roller in the second degree of freedom by actuating a displacement of the roller in the third degree of freedom.